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What is claimed is:

1. A method of generating communication signals comprising the steps of:

selecting a code length, said code length comprising a plurality of chips, wherein each chip of said plurality of chips is one of a non-zero value and a zero value; and

arraying said plurality of chips such that there is a plurality of said zero values within said plurality of chips and one or more said non-zero values is arrayed in accordance with a ruler.

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2. The method according to claim 1, wherein said ruler is substantially orthogonal to time-shifted versions of said ruler.

3. The method according to claim 2, wherein said chips are arrayed such that no two of said non-zero values are adjacent.

4. The method according to claim 3, wherein said non-zero value is one of a positive value and a negative value and wherein said positive value and said negative value correspond to an amplitude of an impulse.

5. The method according to claim 1, wherein said non-zero value is one of a positive value and a negative value.

6. The method according to claim 5, wherein said ruler is substantially orthogonal to all time-shifted versions of said ruler.

7. The method according to claim 6, wherein said step of arraying said plurality of chips further comprises the step of arraying at least one said positive value and at least one said negative value in accordance with a pattern.

8. The method according to claim 7, wherein said pattern is selected from a family of patterns.

9. The method according to claim 8, wherein said family of patterns wherein any pattern within said family of patterns is substantially orthogonal to substantially all time-shifted versions of any other pattern within said family of patterns.

10. The method according to claim 9, wherein said values are arrayed such that no two of said non-zero values are adjacent.

11. The method according to claim 10, wherein said positive value and said negative value correspond to an amplitude of an impulse.

12. The method according to claim 5, wherein said ruler belongs to a family of rulers wherein any ruler within said family of rulers is substantially orthogonal to all time-shifted versions of any other ruler within said family of rulers.

13. The method according to claim 12, wherein said step of arraying said plurality of chips further comprises the step of arraying at least one said positive value and at least one said negative value in accordance with a pattern.

14. The method according to claim 13, wherein said pattern is selected from a family of patterns.

15. The method according to claim 14, wherein said family of patterns is such that any pattern within said family of patterns is substantially orthogonal to substantially all time-shifted versions of any other pattern within said family of patterns.

16. The method according to claim 15, wherein said values are arrayed such that no two of said non-zero values are adjacent.

17. The method according to claim 16, wherein said positive value and said negative value correspond to an amplitude of an impulse.

18. A method for generating a set of communication signal sequences comprising the steps of:

defining said set such that all of said communications signal codes in said set have a code length, said code length comprising a plurality of chips, each of said chips having a value, said value being one of a positive value, a negative value and a zero value;

arraying said chips such that at least one said positive value and at least one said negative value is placed in accordance with a ruler, said ruler being substantially orthogonal to all time-shifted versions of said ruler, and such that at least one of said chips has a zero value; and

arraying said chips such that said at least one positive value and said at least one negative value are placed in accordance with a pattern, said pattern being from

a family of binary patterns wherein each pattern within said family of patterns is substantially orthogonal to substantially all time-shifted versions of each other pattern within said family of patterns.

19. The method according to claim 18, wherein said ruler belongs to a family of rulers wherein each ruler within said family is substantially orthogonal to each other ruler within said family of rulers.

20. The method according to claim 19, wherein said code length is 26 chips.

21. The method according to claim 20, wherein said family of rulers comprises one ruler where said one ruler comprises seven non-zero value chips.

22. The method according to claim 21, wherein said family of patterns is comprised of eight patterns.

23. The method according to claim 19, wherein said chips are arrayed such that no two of said non-zero values are adjacent.

24. The method according to claim 23, wherein said positive value and said negative value correspond to an initial direction of an impulse.

25. The method according to claim 24, wherein said code length is 30 chips.

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26. The method according to claim 25, wherein said family of rulers comprises a first ruler and a second ruler where said first ruler and said second ruler comprise four non-zero value chips.

27 The method according to claim 26, wherein said family of patterns is comprised of four patterns.

28. A radio communication system comprising:

a radio transmitter; and

a radio receiver,

said transmitter and said receiver employing a communications signal having a code length, said code length comprising a plurality of chips, wherein each chip of said plurality of chips is one of a non-zero value and a zero value, and wherein said chips are arrayed such that there is a plurality of zero values within said plurality of chips and one or more said non-zero values is arrayed in accordance with a ruler.

29. The radio communication system of claim 28, wherein said ruler is substantially orthogonal to time-shifted versions of said ruler.

30. The radio communication system of claim 29, wherein said chips are arrayed such that no two of said non-zero values are adjacent.

31. The radio communication system of claim 30, wherein said non-zero value is one of a positive value and a negative value and wherein said positive value and

said negative valued correspond to an amplitude of an impulse and wherein said non-value is one of a positive value and a negative value.

32. The radio communications system of claim 28, wherein said positive value and said negative value correspond to an amplitude of an impulse.

33. The radio communication system of claim 32, wherein said ruler is substantially orthogonal to all time-shifted versions of said ruler.

34. The radio communication system of claim 33, wherein said step of arraying said plurality of chips further comprises the step of arraying at least one said positive value and at least one said negative value in accordance with a pattern.

35. The radio communication system of claim 34, wherein said pattern is selected from a family of patterns.

36. The radio communication system of claim 35, wherein said family of patterns wherein any pattern within said family of patterns is substantially orthogonal to substantially all time-shifted versions of any other pattern within said family of patterns.

37. The radio communication system of claim 36, wherein said values are arrayed such that no two of said non-zero values are adjacent.

38. The radio communication system of claim 32, wherein said ruler belongs to a family of rulers wherein any ruler within said family of rulers is substantially

orthogonal to all time-shifted versions of any other ruler within said family of rulers.

39. The radio communication system of claim 38, wherein said step of arraying said plurality of chips further comprises the step of arraying at least one said positive value and at least one said negative value in accordance with a pattern.

40. The radio communication system of claim 39, wherein said pattern is selected from a family of patterns.

41. The radio communication system of claim 40, wherein said family of patterns is such that any pattern within said family of patterns is substantially orthogonal to substantially all time-shifted versions of any other pattern within said family of patterns.

42. The radio communication system of claim 41, wherein said values are arrayed such that no two of said non-zero values are adjacent.

43. The radio communication system of claim 42, wherein said positive value and said negative value correspond to an amplitude of an impulse.